What We Claim:

1.   A method of controlling data flow within a network device, said method comprising the steps of:

receiving a data packet into the network device;

snooping the data packet before the data packet is stored in a memory buffer of the network device to determine a packet size based upon a number of bits per bytes within the data packet;

aggregating the packet size to generate a total number of data packets within a burst if the packet size exceeds a predetermined packet size;

lowering a threshold of the memory buffer to a reset threshold if the total number of data packets exceeds a predetermined number of consecutive data packets; and

activating a pause frame based upon the reset threshold to temporarily suspend transmission of incoming data packets to the network device.

2.   The method as recited in claim 1, wherein the network device comprises a multiple-linked chip device.

3.   The method as recited in claim 1, wherein the step of snooping includes snooping the data packet received at an input port.

4.   The method as recited in claim 1, wherein the step of snooping includes snooping the data packet received at an expansion port.

5.   The method as recited in claim 1, wherein the step of snooping includes snooping the data packet received at an input port and an expansion port.

6.   A device for controlling data flow within a network device, said device comprising:

a snooping module contained within the network device and configured to snoop a data packet before the data packet is stored in a memory buffer of the network device to determine a packet size based upon the bits per byte of the data packet;

a counter connected to the snooping module, wherein the counter adds the packet size to generate a total number of data packets within a burst if the packet size exceeds a predetermined packet size;

a threshold lowering module connected to receive instructions from the snooping module and configured to lower a threshold of the memory buffer to a reset threshold if the total number of data packets exceeds a predetermined number of consecutive data packets; and

a pause activation module configured to receive instructions from the threshold lowering module in order to trigger a pause frame based upon the reset threshold to temporarily suspend transmission of incoming data packets to the network device.

7.   A device for controlling data flow within a network device, wherein the network device comprises a multiple-linked chip device.

8.   The device as recited in claim 6, wherein the snooping module is configured to snoop the data packet received at an input port.

9.   The device as recited in claim 6, wherein the snooping module is configured to snoop the data packet received at an expansion port.

10.   The device as recited in claim 6, wherein the snooping module is configured to snoop the data packet received at an input port and an expansion port.

11. A device for controlling data flow within a network device, said device comprising:

receiving a data packet into the network device;

snooping means contained within the network device for snooping a data packet before the data packet is stored in a memory buffer of the network device to determine a packet size based upon a number of bits/bytes of the data packet;

aggregating means included within the snooping module for aggregating the packet size to generate a total number of data packets within a burst if the packet size exceeds a predetermined packet size;

threshold reset means connected to receive instructions from the snooping module for lowering a threshold of the memory buffer to a reset threshold if the total number of data packets exceeds a predetermined number of consecutive data packets; and

pause frame activation means connected to receive instructions from the threshold lowering module for activating a pause frame based upon the reset threshold to temporarily suspend transmission of incoming data packets to the network device.

12. The device as recited in claim 11, wherein the network device comprises a multiple-linked chip device.

13. The device as recited in claim 11, wherein the snooping means snoops the data packet received at an input port.

14. The device as recited in claim 11, wherein the snooping means snoops the data packet received at an expansion port.

15. The device as recited in claim 1, wherein the snooping means snoops the data packet received at an input port and an expansion port.

16.   A method of controlling data flow within a multiple-linked chip device, said method comprising the steps of:

receiving the data packet into the multiple-linked chip device;

snooping data packets before the data packets are stored in a memory buffer of the multiple-linked chip device to determine a packet size based upon the bits per bytes of the data packets;

snooping the data packets received at both an input port and an expansion port connected to the multiple-linked chip to determine a packet size;

aggregating the packet size of the data packets to generate a total number of data packets within a burst if the data packet size exceed a predetermined packet size;

lowering a threshold of the memory buffer to a reset threshold if the total number of data packets exceeds a predetermined number of consecutive data packets; and activating a pause frame based upon the reset threshold to temporarily suspend transmission of incoming data packets to the multiple-linked chip.

17.   The method as recited in claim 16, wherein the reset threshold is preprogrammed.

18.   The method as recited in claim 16, wherein the reset threshold is automatically determined based upon a capacity of data packets currently stored in the memory buffer.

19.   A device for controlling data flow within a multiple-linked chip device, said device comprising:

a receiving module for receiving the data flow within the multiple linked chip device;

a snooping module contained within the multiple-linked chip device and configured to snoop data packets before the data packets are stored in a memory buffer of the network device to determine a packet size based upon the bits per bytes of the data packets;

a counter included within the snooping module, wherein the counter adds packet size of the data packets to generate a total number of data packets within a burst if the packet size exceeds a predetermined packet size;

a threshold lowering module connected to receive instructions from the snooping module and configured to lower a threshold of the memory buffer to a reset threshold if the total number of data packets exceeds a predetermined number of consecutive data packets; and

a pause activation module configured to receive instructions from the threshold lowering module in order to trigger a pause frame based upon the reset threshold to temporarily suspend transmission of incoming data packets to the multiple-linked chip device.

20. The device as recited in claim 19, wherein the reset threshold is preprogrammed.

21. The device as recited in claim 16, wherein the reset threshold is automatically determined based upon a capacity of data packets currently stored in the memory buffer.

22. A device for controlling data flow within a multiple-linked chip device, said device comprising:

snooping means contained within the multiple-linked chip device for snooping data packets before the data packets are stored in a memory buffer of the multiple-linked chip device to determine a packet size, wherein the snooping means snoops the data packets received at both an input port and an expansion port connected to

the multiple-linked chip to determine a packet size of the data packets received at the input port and the expansion port;

aggregating means included within the snooping module for aggregating the packet size of the data packets to generate a total number of data packets within a burst if the data packet size exceed a predetermined packet size;

threshold reset means connected to receive instructions from the snooping module for lowering a threshold of the memory buffer to a reset threshold if the total number of data packets exceeds a predetermined number of consecutive data packets; and

pause frame activation means connected to receive instructions from the threshold lowering module for activating a pause frame based upon the reset threshold to temporarily suspend transmission of incoming data packets to the multiple-linked chip.

23.   The device as recited in claim 22, wherein the reset threshold is preprogrammed.

24.   The device as recited in claim 22, wherein the reset threshold is automatically determined based upon a capacity of data packets currently stored in the memory buffer.

25.   A method of controlling data flow within a network device, said method comprising:

predicting a future flow of a chip located within the network device based upon a current flow within another chip and the current flow within the chip; and

determining whether the future flow will cause a memory buffer of the chip to become saturated.